Brochure

PanaFlow HT Flow Meter

Ultrasonic Flow Measurement for Extreme Temperatures

Panametrics
a Baker Hughes business

Ultra-safe, ultra-reliable

Safeguarding the people who work with you is naturally your first concern. At the same time, you need to avoid costly plant downtime while getting the most out of your process.

The PanaFlow HT flow meter puts safety first. As the world's first ultrasonic flow meter with Safety Integrity Level (SIL) certification, the PanaFlow HT delivers accurate, maintenance-free flow measurement in the harshest environments.

Providing ultrasonic performance in safety-critical applications

Ultrasonic flow measurement has been reserved for non-safety critical processes throughout the plant—until now. The IEC61508-certified PanaFlow HT will take the place of older technology wedge and orifice plates in your safety system and bring you all the advantages of ultrasonic metering.

Certified for operation at extreme temperatures in tough applications

The PanaFlow HT is US/CAN, ATEX, and IECEX certified for operation at -200°C (-328°F) to 600°C (1112°F), covering the toughest refinery and downstream applications.

Avoiding downtime, improving your bottom line

While the SIL rating protects your people, you also need a meter that takes care of your assets. The PanaFlow HT provides you one meter for both purposes.

The PanaFlow HT represents years of Panametrics ultrasonic flow meter experience, coupled with GE's technological expertise. It brings reliability, accuracy, and speed to high-temperature and very low-temperature process measurement.

Ultrasonic flow measurement with the PanaFlow HT puts an end to unexpected maintenance costs and process interruptions. You get:

- No obstructions to clog pipes
- No drifting measurements
- No periodic calibrations
- No pressure drops
- Bi-directional measurements

XMT1000 SIL electronics

- SIL-rated analog output—other digital and analog outputs available
- Magnetic keypad for programming without the need for hot permits

Engineered for you

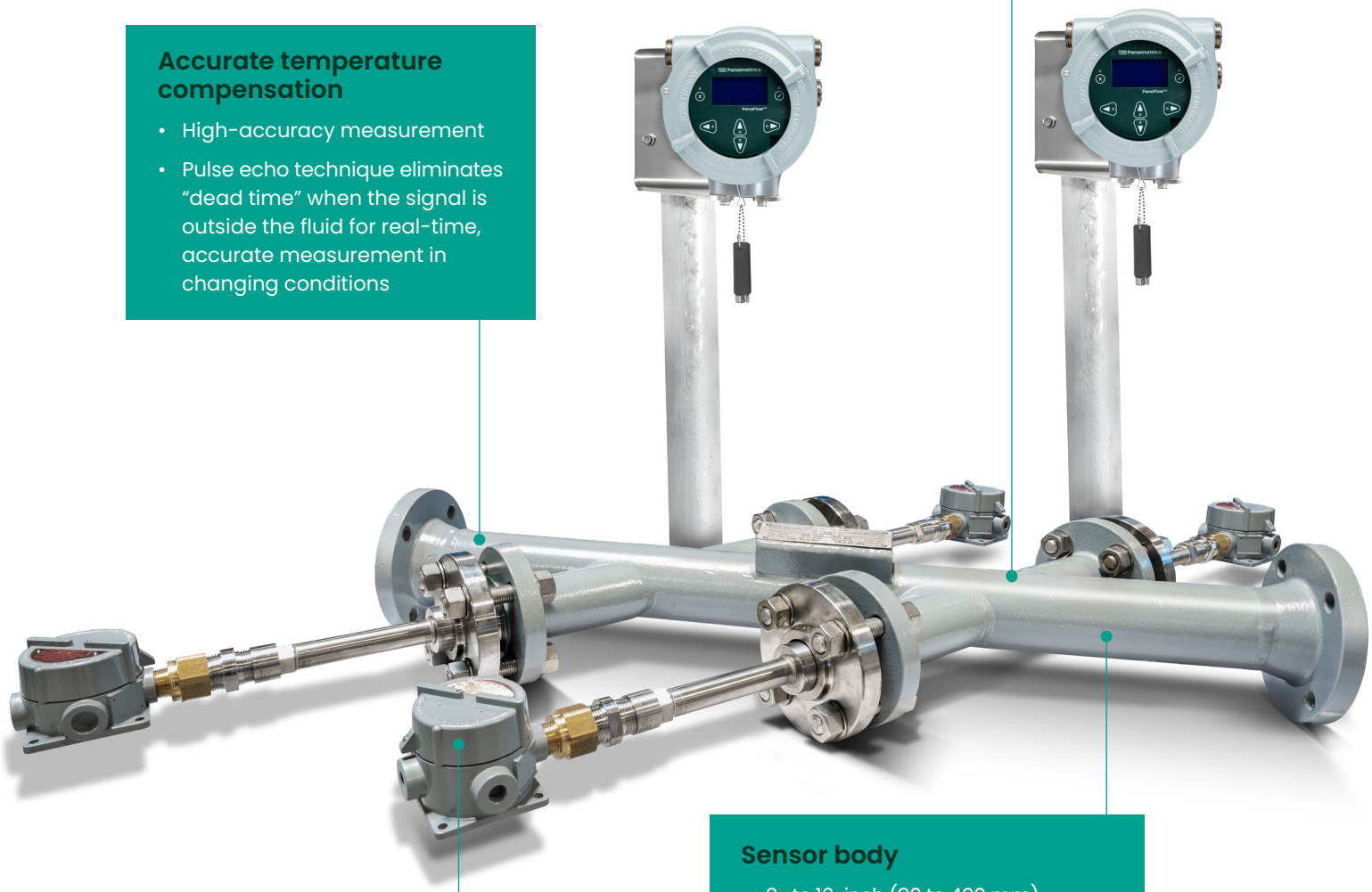
You already know how ultrasonic flow meters deliver reliable, stable measurement around your plant. Everything about the PanaFlow HT is geared toward making your operation more productive and your process safer and more efficient.

PanaFlow HT system

- ± 0.5% accuracy
- SIL Level 2 or 3 certified
- Hazardous area rated
- Extreme process temperatures -200°C (-328°F) to 600°C (1112°F)

Accurate temperature compensation

- High-accuracy measurement
- Pulse echo technique eliminates "dead time" when the signal is outside the fluid for real-time, accurate measurement in changing conditions



Sensor body

- 3- to 16-inch (80 to 400 mm) standard, up to 84 inch upon request
- Multiple path configurations designed specifically for quality and redundancy

Transducers

- Patented Bundle Waveguide Transducer (BWT) system protects transducers from extreme process temperatures
- Stronger signal for robust measurement
- Easy transducer replacement without process shutdown

Ready for your toughest applications

The safe, efficient operation of your refinery equipment impacts the financial success of the entire plant. Outages can cost millions, and accidents, tens of millions. The PanaFlow HT is certified to work in very high-temperature and very low-temperature processes—from -200°C (-328°F) to 600°C (1112°F)—and in corrosive or aggressive fluids.

Typical refinery applications include:

- Vacuum distillation units
- Delayed coker units
- Fluidic catalytic cracking units
- Hydrotreaters
- Visbreakers
- Crude distillation units

The PanaFlow HT's remarkable reliability and accuracy also make a compelling argument for installation in remote, hazardous, or extreme situations, reducing cost of ownership by avoiding costly calibration and maintenance.

Return on your investment

In maintenance costs and downtime alone, the PanaFlow HT saves you money.

	Failures	Hours Work	People	Labour Rate	Cost
Steam Clean	23	4	2	$50/hr	$9,200
Pull Out	3	6	4	$50/hr	$3,600
Total Failures	26	**Total Annual Maintenance Cost**			**$12,800**

Assumptions:

- Approximately one traditional technology meter failure or maintenance cycle every other week
- 90% of meters fixed with steam or other fluid blow down (two operators to get the meter running, approximately four hours of labor)
- 10% of meters required removal from service (up to five operators, pipe fitters, and technicians, approximately six hours of labor)
- Labor cost average: $50/hour

Take the PanaFlow HT 3D tour, or ***learn more here***.

SIL: Helping reduce risk to people and processes

Safety Integrated Level (SIL) establishes the safety integrity of a piece of equipment so that it performs to the requirements of the Safety Instrumented Function (SIF), which is part of a Safety Instrumented System (SIS). SIL Level 4 represents the highest level of safety integrity and SIL Level 1, the lowest. The PanaFlow HT, which is the world's first flow meter with an SIL certification, is SIL Level 3 rated. To attain this rating, every component of the meter—from the ultrasonic transducers to the meter body—is reviewed by a third party.

The advantages of an SIL-rated flow meter

An SIL-rated flow meter brings you a certified level of reliability, giving you confidence in your plant's safety-critical applications:

- Reducing the risk of loss of life
- Reducing the risk to refinery assets
- Reducing the risk to the environment
- Safeguarding corporate reputations

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